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1881/82

SIXTH

ANNUAL CATALOGUE

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UNIVERSITY OF ILLINOIS

Agricultural *and* Mechanical College

OF TEXAS.

SESSION 1881-82.

RAILROAD DEPOT AND POSTOFFICE, COLLEGE STATION.

BRYAN, TEXAS.
BRAZOS PILOT BOOK AND JOB PRINTING HOUSE

SIXTH
ANNUAL CATALOGUE

— OF THE —

Agricultural and Mechanical College

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RAILROAD DEPOT AND POSTOFFICE:
COLLEGE STATION, TEXAS.
1882.

AGRICULTURAL MECHANICAL COLLEGE

OF TEXAS.

This College owes its origin to—

AN ACT

DONATING PUBLIC LANDS TO THE SEVERAL STATES AND TERRITORIES WHICH MAY PROVIDE COLLEGES FOR THE BENEFIT OF AGRICULTURE AND THE MECHANIC ARTS.

1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled—*

That there be granted to the several States, for the purposes hereinafter mentioned, an amount of public land, to be apportioned to each State, a quantity equal to Thirty Thousand acres for each Senator and Representative in Congress to which the States are respectively entitled by the apportionment under the census of eighteen hundred and sixty: PROVIDED, That no mineral lands shall be selected or purchased under the provisions of this act.

SEC. 2. AND BE IT FURTHER ENACTED, That the land aforesaid, after being surveyed, shall be apportioned to the several States in sections or sub-division of sections not less than one quarter of a section; and whenever there are public lands in a State subject to sale at private entry at one dollar and twenty-five cents per acre, the quantity to which said States shall be entitled shall be selected from such lands within the limit to each of the States, and the Secretary of the Interior is hereby directed to issue to each of the States in which there is not the quantity of public lands subject to sale at private entry at one dollar and twenty-five cents per acre, to which said State may be entitled under the provisions of this act, land scrip to the amount in acres for the deficiency of its distributive share; said scrip to be sold by said States and the proceeds applied to the uses and purposes prescribed in this act, and for no other use or purpose whatsoever; PROVIDED, That in no case shall any State to which land scrip may thus be issued be allowed to locate the same within the limits of any other State, or of any Territory of the United States, but their assignees may thus locate said land

scrip upon any of the unappropriated lands of the United States subject to sale at private entry at one dollar and twenty-five cents or less, per acre : AND PROVIDED FURTHER, that not more than one million acres shall be located by such assignees in any one of the States : AND PROVIDED FURTHER, That no such location shall be made before one year from the passage of this act.

SEC. 3. AND BE IT FURTHER ENACTED, That all the expenses of management, superintendence and taxes from date of selection of said lands, previous to their sales, and all expenses incurred in the management and disbursement of the moneys which may be received therefrom, shall be paid by the States to which they may belong, out of the treasury of said States so that the entire proceeds of the sale of said lands shall be applied without any diminution whatever to the purposes hereinafter mentioned.

SEC. 4. AND BE IT FURTHER ENACTED, That all moneys derived from the sale of the lands aforesaid, by the States to which the lands are apportioned, and from the sale of land scrip hereinbefore provided for, shall be invested in stocks of the United States, or of the States, or some other safe stocks ; yielding not less than five per centum upon the par value of said stocks ; and that the moneys so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished (except so far as may be provided in section fifth of this act), and the interest of which shall be inviolably appropriated by each State which may take and claim the benefit of this act, to the endowment, support and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical students, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.

SEC. 5. AND BE IT FURTHER ENACTED, That the grant of land and land scrip hereby authorized, shall be made on the following conditions, to which, as well as to the provisions hereinbefore contained, the previous assent of the several States shall be signified by legislative acts :

First, If any portion of the fund invested, as provided by the foregoing section, or any portion of the interest thereon, shall, by any action or contingency, be diminished or lost, it shall be replaced by the State to which it belongs, so that the capital of the fund shall remain forever undiminished ; and the annual interest shall be regularly applied without diminution to the purposes mentioned in the fourth section of this act, except that a sum not exceeding ten per centum upon the amount received by any State under the provisions of this act, may be expended for the purchase of lands for sites or experimental farms, wherever authorized by the respective Legislatures of said States.

Second, No portion of said fund nor the interest thereon, shall be applied directly or indirectly, under any pretense whatever, to the purchase, erection, preservation, or repair of any building or buildings.

Third, Any State which may take and claim the benefit of the provisions of this act, shall provide, within five years, at least not less than one college, as described in the fourth section of this act, or the grant to such State shall

cease; and said State shall be bound to pay the United States the amount received of any lands previously sold, and that the title to purchasers under the State shall be valid.

Fourth, An annual report shall be made regarding the progress of each college, recording any improvements and experiments made, with their costs and results, and such other matters, including State industrial and economical statistics, as may be supposed useful, one copy of which shall be transmitted by mail free, by each to all the other colleges which may be endowed under the provisions of this act and also one copy to the Secretary of the Interior.

Fifth, When lands shall be selected from those which have been raised to double the minimum price, in consequence of railroad grants, they shall be computed to the States at the maximum price, and the number of acres proportionately diminished.

Sixth, No State, while in a condition of rebellion or insurrection against the government of the United States, shall be entitled to the benefit of this act.

Seventh, No State shall be entitled to the benefits of this act unless it shall express its acceptance thereof by its Legislature within two years from the date of its approval by the president.

SEC. 6. AND BE IT FURTHER ENACTED. That land scrip issued under the provisions of this act shall not be subject to location until after the first day of January, one thousand eight hundred and sixty-three.

SEC. 7. AND BE IT FURTHER ENACTED, That the land officers shall receive the same fees for locating land scrip issued under the provisions of this act as is now allowed for the location of military bounty land warrants under existing laws: PROVIDED, Their maximum compensation shall not be thereby increased.

SEC. 8. AND BE IT FURTHER ENACTED, that the Governors of the several States to which scrip shall be issued under this act shall be required to report annually to Congress all sales made of such scrip until the whole shall be disposed of, the amount received for the same, and what appropriation has been made of the proceeds.

APPROVED JULY 2, 1862.

And to the following amendment:

AN ACT TO AMEND THE FIFTH SECTION OF AN ACT ENTITLED "AN ACT DONATING PUBLIC LANDS TO THE SEVERAL STATES AND TERRITORIES WHICH MAY PROVIDE COLLEGES FOR THE BENEFIT OF AGRICULTURE AND THE MECHANIC ARTS," APPROVED JULY TWO, EIGHTEEN HUNDRED AND SIXTY-TWO, SO AS TO EXTEND THE TIME WITHIN WHICH THE PROVISIONS OF SAID ACT SHALL BE ACCEPTED AND SUCH COLLEGES ESTABLISHED.

1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled—*

That the time in which the several States may comply with the provisions of the act of July two, eighteen hundred and sixty-two, entitled "AN ACT

donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts," is hereby extended so that the acceptance of the benefits of the said act may be expressed within three years from the passage of this act, and the colleges required by the said act may be provided within five years from the date of filing of such acceptance with the Commissioner of the General Land Office: PROVIDED, That when any Territory shall become a State and be admitted into the Union, such new State shall be entitled to the benefits of said act of July two, eighteen hundred and sixty-two, by expressing acceptance therein required within three years from the date of its admission into the Union, and providing the college or colleges within five years after such acceptance, as prescribed in this act: PROVIDED FURTHER, That any state that has heretofore expressed its acceptance of the act herein referred to shall have the period of five years within which to provide at least one college, as described in the fourth section of this act, after the time for providing said college, according to the act of July two, eighteen hundred and sixty two, shall have expired.

APPROVED JULY 23, 1866.

By Joint Resolution, approved November 1, 1866, the Legislature of Texas formally accepted the provisions of the Congressional Acts, and the State received from the General Government scrip for 180,000 acres of public land, the proceeds of which constitute the present permanent endowment fund of this College, and is invested in Texas seven per cent. gold frontier defense bonds to the amount of \$174,000.

The Legislature fulfilled its obligations by passing "AN ACT to provide for the establishment of an Agricultural and Mechanical College of Texas," *approved* April 17, 1871, and by making liberal successive appropriations—aggregating \$202,000—for the buildings and equipments necessary for putting the institution in operation. And the County of Brazos secured its location within its limits by donating to the State the present college farm, a tract of 2416 acres, five miles south of the town of Bryan.

Finally, the Constitution of 1876, article VII, provided: "Section 13. The Agricultural and Mechanical College of Texas, established by the act of the Legislature, passed April 17, 1871, located in the County of Brazos, is hereby made and constituted a branch of the University of Texas, for instruction in agriculture, the mechanic arts, and the natural sciences connected therewith."

The College was formally opened for the reception of students October 4, 1876.

BOARD OF DIRECTORS.

JUDGE JAMES D. THOMAS, - - - - Bryan.

President.

JUDGE GEORGE PFEUFFER, - - New Braunfels.

COL. T. M. SCOTT, - - - - Melissa.

C. C. WIGGIN, ESQ., - - - - Houston.

J. G. GARRISON, ESQ., - - - - Henderson.

PROF. L. L. McINNIS, - - - - College Station.

Secretary of the Board.

OFFICERS OF THE COLLEGE.

JOHN G. JAMES, - - - - *President.*

C. J. CRANE, (U. S. A.) - - - - *Commandant.*

D. PORT SMYTHE, M. D., - - - - *Physician.*

F. VAN WINKLE, - - - - *Secretary.*

B. SBIZA, - - - - *Steward.*

EMIL KELLNER, - - - - *Farm Supt*

F. M. GILBERT, - - - - *Foreman of Shops.*

H. C. EDRINGTON, - - - - *Bryan.*

FISCAL AGENT.

FACULTY.

JOHN GARLAND JAMES,

Professor Moral Philosophy and Political Economy,

JAMES REID COLE, A. M.,

Professor English Language, History and Literature.

HARDAWAY HUNT DINWIDDIE,

Professor Physics and Chemistry.

MARIE EWALD BERNHARD GEORGE GARTNER,

Professor Ancient and Modern Languages.

CHARLES C. GEORGESON,

Professor Scientific and Practical Agriculture and Horticulture.

LOUIS LOWRY MCINNIS, A. M.,

Professor Mathematics.

FRANKLIN VAN WINKLE, M. E.,

Professor Engineering, Mechanics and Drawing.

CHARLES JUDSON CRANE, (1st Lieut. 25th Inf. U. S. A.,)

Professor of Military Science.

ROLL OF STUDENTS.

SESSION 1881-82.

CLASSIFICATION.—The plan of instruction embraces two Courses of three years each—1st, Agriculture, 2nd, Mechanics. The students employed on the first year's studies constitute the Third, or entrance Class; those on the second year's studies, the Second Class; and those on the third year's studies, the First, or Graduating Class.

AGRICULTURAL COURSE.

SECOND CLASS.

Davis, James Madison, Jr.	-	-	-	-	Calvert.
Horton, Charles Johnson	-	-	-	-	Seagoville.
Lewellyn, James Currie	-	-	-	-	West Falls.
McKnight, Jas. William	-	-	-	-	Quitman.

THIRD CLASS.

Brown, Richard McKee	-	-	-	-	Henderson.
Baker, Francis Houston	-	-	-	-	Hamilton.
Blackshear, Geo. Lee	-	-	-	-	Woodyville.
Blanton, Marion Nathaniel	-	-	-	-	Florence, Ala.
Brooks, Thomas W	-	-	-	-	Columbia.
Boothe, John	-	-	-	-	Marshall.
Brown, William Herschel	-	-	-	-	Coffeeville.
Bettis, Walter Dill	-	-	-	-	Orange.
Cook, Edwin Lee	-	-	-	-	Corpus Christi.
Day, Thomas Russell	-	-	-	-	Tom Day.
Dillard, Hal Moorman	-	-	-	-	Cameron.

Dixon, Thomas Holliday	-	-	-	-	Hillsboro.
Eubank, Abner	-	-	-	-	Mexia.
Emory, Berry Woods	-	-	-	-	Files.
Ewing, George Edward	-	-	-	-	Whitman.
Elliott, Frank, Jr.	-	-	-	-	Hempstead.
Ethridge, John Harvey	-	-	-	-	Paluxy.
Foster, Zach Nettles	-	-	-	-	Palestine.
Green, John Middleton	-	-	-	-	Hallettsville.
Goggin, James Mann	-	-	-	-	Hempstead.
Gresham, Lucius Truitt	-	-	-	-	Centreville.
Hull, Charles Frank	-	-	-	-	Carthage.
Hawkins, Edwin W.	-	-	-	-	Daingerfield.
Hedrick, John Isaac	-	-	-	-	Sherman.
Kellner, William Edward	-	-	-	-	A. & M. C. of Tx.
Lincecum, Herbert Clarence	-	-	-	-	Long Point.
Luck, Jules Gustav	-	-	-	-	Ledbetter.
Miller, Benj. Jasper	-	-	-	-	Denison.
Moore, Warren West	-	-	-	-	Austin.
Norheutt, Jerry Elijah	-	-	-	-	Longview.
Nunn, Felix Heiston	-	-	-	-	Bonham.
Pennington, Elijah	-	-	-	-	Brenham.
Pennybacker, Julian	-	-	-	-	Mt. Joy.
Pickens, William Thomas	-	-	-	-	Palestine.
Ragsdale, Robert Lee	-	-	-	-	San Marcos.
Roberts, E. J.	-	-	-	-	Kentucky Town.
Rowell, Thomas David	-	-	-	-	Jefferson.
Scott, William Walter	-	-	-	-	Dexter.
Seago, Tilghman Benton	-	-	-	-	Seagoville.
Stanford, Lewis Steele	-	-	-	-	Waco.
Staples, George	-	-	-	-	Sherman.
Story, William Heirff	-	-	-	-	San Antonio.
Sherley, Andrew Lewis	-	-	-	-	Melissa.
Stirling, Sam Houston	-	-	-	-	Anahuac.
Scott, Austin Lee	-	-	-	-	Denison.
Smith, E. C.	-	-	-	-	Bonham.
Scott, Walter	-	-	-	-	Denison.

Thompson, Chas. Alphonzo	-	-	-	-	Annona.
Tompkins, Lewis Christopher	-	-	-	-	Hempstead.
Tomlinson, Robt. E. Lee	-	-	-	-	Marlin.
Terry, John Choate	-	-	-	-	Rockport.
Whitfield, Frank Hunt	-	-	-	-	San Felipe.
Wilson, William Hubert	-	-	-	-	Houston.
Wipprecht, Walter	-	-	-	-	New Braunfels.
White, Henry Kirk	-	-	-	-	Waelder.

MECHANICAL COURSE.

FIRST CLASS.

Armstrong, Miller Francis	-	-	-	-	Buck Horn.
Baker, Searcy	-	-	-	-	Plantersville.
Burford, Jesse McLeary	-	-	-	-	Weimar.
Cravens, James Rains	-	-	-	-	Haught's Store.
Ford, William Beauregard	-	-	-	-	Lewisville.
Graves, Charles Stanford	-	-	-	-	Hempstead.
Hare, Silas Albert	-	-	-	-	Sherman.
Lipscomb, Robert S.	-	-	-	-	Grapevine.
Rice, David	-	-	-	-	Houston.
Sawyer, Robert	-	-	-	-	Dresden.
Talbot, Aaron	-	-	-	-	Calvert.
Von Bieberstein, Fred. Rogalla	-	-	-	-	Burton.
Watson, David Hughes	-	-	-	-	Brenham.

SECOND CLASS.

Allen, Frank Sexton	-	-	-	-	Galveston.
Brueggerhoff, Chas. Ernst	-	-	-	-	Austin.
Caldwell, Jno. Calhoun	-	-	-	-	Corpus Christi.
Cooksey, James Banajah	-	-	-	-	Chatfield.
Edwards, John Franklin	-	-	-	-	Aubrey.
Finlay, Quitman	-	-	-	-	Galveston.
Gilleau, John Alfred	-	-	-	-	Dresden.
Griffith, Augustus Bascom	-	-	-	-	Terrell.

Kennedy, Osborne	-	-	-	-	-	-	Mexia.
Knolle, Bernard Ernst	-	-	-	-	-	-	Industry.
Matkin, Chas. Thomas	-	-	-	-	-	-	Hearne.
McCormick, Willis Boyce	-	-	-	-	-	-	Weimar.
Miller, Herman Julius	-	-	-	-	-	-	Bellville.
Morrow, Joseph Dixie	-	-	-	-	-	-	Calvert.
Moseley, William Edwin	-	-	-	-	-	-	Jefferson.
Moss, John Wray	-	-	-	-	-	-	Henderson.
Patrick, Albert T.	-	-	-	-	-	-	Navasota.
Peeler, Anderson James	-	-	-	-	-	-	Austin.
Phenix, Newton Jasper	-	-	-	-	-	-	Paluxy.
Ragsdale, David Chapel	-	-	-	-	-	-	San Marcos.
Risher, Harry Cook	-	-	-	-	-	-	Austin.
Scott, Moran	-	-	-	-	-	-	Gainsville.
Seymour, Samuel King	-	-	-	-	-	-	Columbus.
Tilson, Martin David	-	-	-	-	-	-	Texarkana.
Tuller, Walter Lee	-	-	-	-	-	-	Galveston.
Watson, Arthur Osborne	-	-	-	-	-	-	Brenham.
Wesson, James Micajah	-	-	-	-	-	-	Navasota.
Williams, Nelson Miller	-	-	-	-	-	-	Winchester.

THIRD CLASS.

Andrews, Varney	-	-	-	-	-	-	Cooper.
Anderson, James Wade	-	-	-	-	-	-	Aquilla.
Allen, Royall Jonathan	-	-	-	-	-	-	Melissa.
Anthony, Samuel Richard	-	-	-	-	-	-	Kaufman.
Arrington, Sam. Jesse	-	-	-	-	-	-	Borden.
Barry, Augustus	-	-	-	-	-	-	Iredell.
Burford, Nat M., Jr.	-	-	-	-	-	-	Dallas.
Barbee, Jared William	-	-	-	-	-	-	Brenham.
Bryan, Henry Augustus	-	-	-	-	-	-	Buena Vista.
Brown, Jacob Walter	-	-	-	-	-	-	Leesville.
Baumgarten, Ernst	-	-	-	-	-	-	Schulenberg.
Boykin, Robt. Seymour	-	-	-	-	-	-	Schulenberg.
Barclay, James Buchanan	-	-	-	-	-	-	Woodville.
Bettis, William Irwin	-	-	-	-	-	-	Orange.
Barnes, Jesse	-	-	-	-	-	-	Trinity.
Baird, Madison Henry	-	-	-	-	-	-	Maysville.

Booty, A. A.	-	-	-	-	-	Georgetown.
Buchanan, Samuel Wm.	-	-	-	-	-	Bryan.
Buchanan, Amos Wilson	-	-	-	-	-	Bryan.
Bower, Charles William	-	-	-	-	-	Jefferson.
Carroll, Sidney Johnston	-	-	-	-	-	Denton.
Couts, Henry Johnson	-	-	-	-	-	Weatherford.
Clements, James Anderson	-	-	-	-	-	China Springs.
Childress, Walter Harley	-	-	-	-	-	Schulenberg.
Collier, Juriah Fuller	-	-	-	-	-	Coltharp.
Crook, James Jones	-	-	-	-	-	Washington.
Corley, James Robert	-	-	-	-	-	Crockett.
Calvert, James Alexander	-	-	-	-	-	Franklin.
Collins, George	-	-	-	-	-	Bryan.
Clark, Lee Cummings	-	-	-	-	-	Georgetown.
Collins, Jared Milam	-	-	-	-	-	Buck Horn.
Cochrane, Milam D.	-	-	-	-	-	Buck Horn.
Daughtrey, Bryan Benj.	-	-	-	-	-	Nelsonville.
Dickerson, Wm. Henry	-	-	-	-	-	Richmond.
Dysart, William Crisp	-	-	-	-	-	Van Alstyne.
De Freese, Charles Allen	-	-	-	-	-	Houston.
Delemater, Benj. Franklin	-	-	-	-	-	Caldwell.
De Graffenreid, Garland	-	-	-	-	-	Mooreville.
Dunaway, Jno. Foster	-	-	-	-	-	Waxahachie.
Eversberg, Emil Hugo	-	-	-	-	-	Industry.
Easley, William Lee	-	-	-	-	-	Ft. Worth.
Elliott, Austin Edwin	-	-	-	-	-	Sherman.
Fordtran, Robt. E. Lee	-	-	-	-	-	Industry.
Fain, Tupper Carrington	-	-	-	-	-	Jacksonville.
Ferguson, Jesse Avery	-	-	-	-	-	Tom Day.
Furdeaux, Wm. Christopher	-	-	-	-	-	Trinity Mills.
Felder, Alfred Franklin	-	-	-	-	-	Chappel Hill.
Fisher, Rhoads, Jr.	-	-	-	-	-	Austin.
Greenwood, Frank Thos.	-	-	-	-	-	Austin.
Gullett, Geo. Albert Sidney Johnston	-	-	-	-	-	San Marcos.
Good, Ben McCulloch	-	-	-	-	-	Dallas.
Gray, James Lee	-	-	-	-	-	Brenham.
Giesecke, Gustav	-	-	-	-	-	New Braunfels.

Gunning, James Houston	-	-	-	-	-	Chireno.
Gibson, Geo. Howard	-	-	-	-	-	Trinity.
Gibson, Benj. James	-	-	-	-	-	Trinity.
Griffin, David Bushrod	-	-	-	-	-	Aquilla.
Garrison, Henry Devereux	-	-	-	-	-	Caledonia.
Gaines, Sidney Johnston	-	-	-	-	-	Landrum.
Green, Robt. Berrien	-	-	-	-	-	San Antonio.
Hammond, Peter Killingsworth	-	-	-	-	-	Hempstead.
Hamilton, Wm. Mollette	-	-	-	-	-	Jefferson.
Hunt, Jno. Benjamin	-	-	-	-	-	Caldwell.
Highsmith, Francis Cicero	-	-	-	-	-	Snake Prairie.
Harbert, Green Alston	-	-	-	-	-	Columbus.
Hartzell, Benj. Franklin	-	-	-	-	-	Dresden.
Hunt, William Pascal	-	-	-	-	-	Victoria.
Hough, Samuel	-	-	-	-	-	Fayetteville.
Hutchison, Wilson Frank	-	-	-	-	-	Brenham.
Hurst, William Marvin	-	-	-	-	-	Dallas.
Josey, Jackson Evander	-	-	-	-	-	Huntsville.
Jackson, William Frank	-	-	-	-	-	Trinity Mills.
Kirkpatrick, David Forest	-	-	-	-	-	Lewisville.
Kerr, James Lee	-	-	-	-	-	Flatonia.
Ledbetter, Chas. Pillow	-	-	-	-	-	Austin.
Laas, Edward Charles	-	-	-	-	-	Shelby.
Lasater, Thomas	-	-	-	-	-	Huntsville.
Lacy, John Claude	-	-	-	-	-	Longview.
Lewis, Junius Knox	-	-	-	-	-	New York.
Lindeman, John W.	-	-	-	-	-	Blanco.
Lancaster, Cornelius Granberry	-	-	-	-	-	Marshall.
McKinney, Wm. Edwin	-	-	-	-	-	Austin.
Miller, Kinnie Nicholas	-	-	-	-	-	New Ulm.
Meinecke, Adolph Henry	-	-	-	-	-	Bellville.
Machemehl, Lewis	-	-	-	-	-	Bellville.
McLean, Daniel	-	-	-	-	-	Augusta.
McGregor, Christopher Gilbert	-	-	-	-	-	Wesley.
McGuire, Eugene James	-	-	-	-	-	Ledbetter.
Mitchell, James Harvey, Jr.	-	-	-	-	-	Bryan.
Mackenson, Bernard Constantine	-	-	-	-	-	Belton.

McKinnon, Laughlin	-	-	-	-	-	Hackberry.
Moore, Milton Hornsby	-	-	-	-	-	San Antonio.
Munson, Helen Armour	-	-	-	-	-	Oyster Creek.
Mallow, Jno. Hempstead	-	-	-	-	-	Clio.
Magee, Samuel Bullock	-	-	-	-	-	Marlin.
Maltby, Jasper Adelmoine	-	-	-	-	-	Corpus Christi.
McDade, Jack Cochrane	-	-	-	-	-	Buck Horn.
McCoy, Sidney Waxie	-	-	-	-	-	Jefferson.
McDowell, Alexander Byrd	-	-	-	-	-	Reagan.
McReynolds, Robt. Archer	-	-	-	-	-	Sabine Pass.
Neiderauer, Jno. Helmuth	-	-	-	-	-	LaGrange.
Nunn, Luther Augustus	-	-	-	-	-	Boston.
Porter, Newel Dever	-	-	-	-	-	Hookerville.
Pfeuffer, Frank Lionheart	-	-	-	-	-	New Braunfels.
Pfeuffer, Gustav August Lionheart	-	-	-	-	-	New Braunfels.
Pearce, James	-	-	-	-	-	Oak Grove.
Porter, Alpha Young	-	-	-	-	-	Du Pre.
Philpott, Wm. Benjamin	-	-	-	-	-	Bryan.
Peak, J. S.	-	-	-	-	-	Dallas.
Ramsel, Ewald	-	-	-	-	-	Burton.
Rylander, W. A. Pitts	-	-	-	-	-	Lockhart.
Roach, George Washington	-	-	-	-	-	Weatherford.
Robertson, Osborne Bragg	-	-	-	-	-	Waelder.
Robb, Howard Lee	-	-	-	-	-	Trinity.
Randle, John Brown	-	-	-	-	-	Washington.
Robertson, Walter Lee	-	-	-	-	-	Salado.
Robertson, Joseph Bell	-	-	-	-	-	Ripley.
Storey, John Douglas	-	-	-	-	-	West Falls.
Swift, Charles Mansfield	-	-	-	-	-	Refugio.
Samuel, Alonzo Murray	-	-	-	-	-	Greenville
Slaughter, George William	-	-	-	-	-	San Augustine.
Spellings, William Thomas	-	-	-	-	-	Jefferson.
Sydnor, Carter Walker	-	-	-	-	-	Houston.
Searcy, James U.	-	-	-	-	-	Edom.
Spell, Lee	-	-	-	-	-	Huntysille.
Stoner, Washington Hunt	-	-	-	-	-	Victoria.
Smith, George L.	-	-	-	-	-	Lyons.

Scharnberg, Emil Henry	-	-	-	-	-	Shelby.
Slaughter, Travis Broocks	-	-	-	-	-	Kaufman.
Swain, Hugh	-	-	-	-	-	Clarksville.
Smith, Isaac N.	-	-	-	-	-	Henderson.
Thompson, William Robert Patrick	-	-	-	-	-	Nelsonville.
Tooke, Sidney Tait	-	-	-	-	-	Weimar.
Terrell, Charles Vernon	-	-	-	-	-	Decatur.
Taliaferro, Edwin Munford	-	-	-	-	-	Houston.
Talbot, Joseph	-	-	-	-	-	Calvert.
Tabor, George Reed	-	-	-	-	-	Bryan.
Townsend, Moses Solon	-	-	-	-	-	Columbus.
Testard, Hugh Adolph	-	-	-	-	-	Brenham.
Thompson, John Wheat	-	-	-	-	-	San Antonio.
Voelkel, Ernst William	-	-	-	-	-	Shelby.
Viser, Carrington	-	-	-	-	-	Hallettsville.
Von Rosenberg, Frederick Charles	-	-	-	-	-	Austin.
Williamson, William Marcellus	-	-	-	-	-	Bryan.
Wilson, Lee	-	-	-	-	-	Brenham.
Wilson, Charles Patton	-	-	-	-	-	Breckenridge.
Walhrmund, Henry	-	-	-	-	-	Fredricksberg.
Wyse, Alonzo Alexander	-	-	-	-	-	Bryan.
Wood, James Masterson	-	-	-	-	-	Galveston.
Williams, Tyler Curtis	-	-	-	-	-	San Antonio.
Winkler, Clinton M.	-	-	-	-	-	Corsicana.
Wilson, James Boone	-	-	-	-	-	St. Elmo.
Wright, Earl Eugene	-	-	-	-	-	Jonesville.
Wilm, Sam Julius	-	-	-	-	-	Kopperl.
Westbrook, Moses Strong	-	-	-	-	-	Mastersville.
Williams, James Clinton	-	-	-	-	-	Walker.
Yeager, August Bernard	-	-	-	-	-	Flatonia.
Zachry, Daniel Haise	-	-	-	-	-	Jefferson.

RECAPITULATION.

Agricultural course :

Second Class	4	
Third Class	55	
		<hr/>
		59

Mechanical course :

First Class.....	13	
Second Class.....	28	
Third Class	158	
		<hr/>
		199
		<hr/>
Total....		258



DEPARTMENTS OF INSTRUCTION.

DEPARTMENT OF PHILOSOPHY AND POLITICAL ECONOMY.

President John G. James.

The subjects taught are :

I. **PSYCHOLOGY.**—An outline only will be attempted. Consciousness is assumed as a basis of a true psychology, and the Intellectual Powers viewed as modes of it. The Sensibilities and the Will are next treated, followed by the course in

II. **MORAL PHILOSOPHY**, in which the intuitional theory of morals is taught, with the criticism of utilitarianism. Lectures on the history of philosophical speculation will be given ; and original criticisms and essays upon ethical problems required from the students.

TEXT-BOOK,—Calderwood's Hand-Book of Moral Philosophy, Ueberweg's History of Philosophy.

III. **POLITICAL ECONOMY.**—This subject will be taught by lectures based upon Mill's Principles of Political Economy, but the views of opposing economists will be given. The relations of Capital and Labor, and the various systems of Currency, Banking, Taxation, Tariff, etc., are discussed with special reference to the

political and social institutions of America, and its industrial interests.

DEPARTMENT OF ENGLISH.

Prof. J. R. Cole, A. M.

The following subjects are taught :

I. ENGLISH LANGUAGE AND LITERATURE.—Embracing the grammatical and rhetorical structure of the language, its history and development, synonyms and comparative philology. That the student may thoroughly master the principles of his mother tongue, daily recitations are accompanied with practical exercises on the blackboard in writing, spelling, diagramming, analysing and criticising. Constant practice in declamation and composition is required. The Professor awards a prize to the best elocutionist.

The historical development of English literature is carefully traced, and the student is made as familiar with the works of our great authors in poetry, history, philosophy, fiction, science, etc., as the time allotted will permit. Lectures are delivered to the class, and original reviews, essays and criticisms required.

TEXT-BOOKS.—Clark's English Grammar, Hill's Rhetoric and Composition, Johnston & Browne's English Literature, James' Southern Selections for Reading and Oratory.

II. HISTORY.—The object of this course is to give the student a thorough knowledge of the history of his own country and of England, and an outline of the world's history, ancient and modern. Special attention is given to the history of the *people*, and of the gradual development of the civilization, power, laws, constitution, and political system of our Republic. Lectures are given on the history of political parties; of prominent leaders, military, civil, ecclesiastical and educational; of great measures that have convulsed the nation, and of the acquisition and government of our vast territory. The department is supplied with a valuable

series of wall-maps and historical and chronological charts.

TEXT-BOOKS.—Stephens' (Alex. H.) History of the United States, Anderson's Universal History.

For reference and private reading the College library supplies an admirable collection of histories, dictionaries, biographies and encyclopædias, such as Macauley's, Hume's, Green's, Knight's Histories of England; Gibbon's, Merivale's, Mommsen's, Rome; Curtius', Grote's, Greece; Bancroft's, Hildreth's, Von Holst's, Stephens', United States. Encyclopædia Britannica, Chambers, Appleton's Cyclopædias, etc. Poetry and general literature are also well represented.

DEPARTMENT OF CHEMISTRY AND PHYSICS.

Professor H. H. Dineiddie.

Work in this department will commence with a course of General Physics. This will be followed by Theoretical and Descriptive Chemistry, including a view of the historical development of the science. During this part of the course there will be constant practice in the use of symbols and in Stoichiometry.

After a fair knowledge of general principles has been thus acquired, Practical Chemistry will be taken up, and the instruction will consist of actual work in the laboratory. It will commence with the use of the blowpipe, simple glass blowing and fitting up of apparatus, continuing through a course of analysis, wet and dry, qualitative, and, as far as time may allow, quantitative.

Facilities will be offered advanced students to investigate specialties and to present the results of their work, more or less original, in the form of memoirs to be read before the class or handed to the professor. Each student will be required to keep a record of his laboratory work.

In the department of Physics there will be a course embracing general principles elaborated as much as time will allow and illus-

trated by the excellent apparatus of the College. The shops of the mechanical department will be most useful as a laboratory for the practical application of this course.

While standard text books will be used as the basis of instructions, the results of the latest investigations will be presented to the students during their course.

TEXT AND REFERENCE BOOKS.—Roscoe's Chemistry, Caldwell's Agricultural Analysis, Fresenius' Analysis, Church's Laboratory Practice, Thorpe & Muir Qualitative Analysis, Fleischer's Volumetric Analysis, Deschanel's Physics, Avery's Physics, Dana's Mineralogy, Dana's Geology, Lockyer's Astronomy, Watt's Chemical Dictionary, Frick's Technics.

DEPARTMENT OF LANGUAGES.

Professor George Gartner.

This department comprises the ancient and modern languages which are prosecuted, as optional studies, during three years:

While the instruction in the ancient languages consists mainly in thorough systematic drilling of the students in the Grammatical Analysis of the languages, so as to make them subservient to a critical and correct use of the English; in translations from Latin or Greek into English, or from English into Latin or Greek, and in reading extracts from standard works: the instruction in the modern languages does not confine itself to give merely theoretical knowledge, but aims to make them of practical use to the student, viz: to enable him to speak them. Thus the study of the text-books is supplemented by oral and written translation, blackboard exercises, and, as soon as practicable, by conversations in these languages in and out of the class-room.

Aside from the rich stores of information which the modern languages offer to the professional man and the student of science, the practical knowledge of German, French and Spanish is becoming more and more a necessity to the successful business man, and

in view of the large foreign element of our population, and the facilities of an ocean transit which constantly increase our business relations, the study of them is recommended to all.

LATIN.

- I Year. Allen and Greenough's Grammar, Latin Compositions and Reader.
- II Year. Allen and Greenough's Gr. cet., History and Mythology of Rome.
- III Year. Latin Syntax, Extracts from Cicero, Ovid and Virgil, Lectures on Roman Literature.

GERMAN.

- I Year. Eichorn's Grammar (Begun), Adler's Progressive Reader, Written translation, dictation, conversation, and declaiming exercises.
- II Year. Eichorn's Grammar, supplemented by Heyse's Deutsche Grammatik, Andersen's Maerchen, Schiller's Jungfrau von Orleans, Compositions.
- III Year. German Literature, Hodge's Course in Scientific German, Goethe's Egmont, Compositions.

SPANISH.

- I Year. DeTorno's Grammar, Sales' Colmena Espanala; Written translation exercises, etc.
- II Year Review on Grammar, with particular stress laid upon the irregular verbs and on the Idioms, Colmena Espanala, Don Quixote, Compositions.
- III Year. Don Quixote, Lope's Estrella de Sevilla, Spanish Literature, Compositions.

Greek and French classes will be organized as soon as the number of students justifies their formation.

DEPARTMENT OF AGRICULTURE AND HORTICULTURE.

Professor C. C. Georgeson.

This department provides theoretical and practical instruction in agriculture and horticulture. The main object is to teach the principles of scientific and economic husbandry, to cultivate a love of country home life and rural pursuits, and to impress young men with the true importance and dignity of agriculture, the greatest industry of our state. The subjects taught are:

HISTORY AND DESCRIPTION OF DOMESTICATED ANIMALS. This includes all the important breeds of cattle, horses, sheep and swine. The origin and characteristics of each breed are treated of in

detail, as well as the purposes and conditions for which each is best suited. Lectures.

STRUCTURAL AND SYSTEMATIC BOTANY.—The aim in this study is to give the student such knowledge of the structure, habits and classification of plants as may be of practical value to him on the farm. The mode of growth, absorption of nourishment, flowering, fertilization and fructification are thus discussed. Each student is required to collect, press and classify a certain number of species of wild plants—Gray's *Botanics*.

SOILS.—Their formation, constituents, classification, physical properties, etc., are dwelt upon at some length. Lectures. The subject is further extended in agricultural chemistry.

STOCK BREEDING.—This is a continuation of the study of live stock. It treats of the laws which govern development and heredity as applied to the improvement and breeding of domestic animals.—Miles.

HISTORY OF AGRICULTURE.—Under this subject is treated the successive steps by which the art has reached its present stage, and including also a brief consideration of the present condition of agriculture at home and abroad.

FERTILIZERS, FIELD CROPS AND TILLAGE.—The management of crops which can be raised in this state; manures, their application to and action on the soil; the reason for tillage and its influence upon crops. Lectures.

FARM ENGINEERING, including irrigation and the water supply for the farm; drainage, what lands need drainage; buildings, fences, improvemets and machinery, labor, etc.

FORESTRY.—The character and culture of trees suitable for shade, ornament and timber are studied, and experiments tending to throw light on forestry culture suitable for the prairies of Texas are carried out on the grounds.

II. HORTICULTURE.—The gardens, orchard, and vineyard furnish excellent facilities for making the instruction in this subject thoroughly practical. Students will be taught the location, drainage and preparation of gardens, sowing seeds, culture of vegetables, mulching, construction of compost heap, use of natural and artificial manure, construction and use of hot-beds, cold

frames and green houses, transplanting, how to obtain new varieties by cross-breeding, propagation of fruit and ornamental trees, shrubs and herbs, by grafting, budding, layering, and cuttings, best sites for orchards, kind of trees to set out, orchard culture, pruning, etc., best management for each kind of large and small fruit. Landscape gardening will be taught practically in laying off, ornamenting, and improving the extensive grounds of the College.

III. RELATED SCIENCES.

ENTOMOLOGY AND ZOOLOGY.—Brief courses are given in these two sciences to familiarize the student with the classification and general structure of animals. The instruction in entomology has special reference to the insects that are beneficial or injurious to the farmer.

ANATOMY.—A short course on the structure of domestic animals.

VETERINARY SCIENCE.—The diseases common to farm animals, and their remedies.

METEOROLOGY.—The study of atmospheric changes and the laws which govern them is highly important to the agriculturist. A set of meteorological instruments are in operation at the College.

In connection and simultaneously with these studies, each student is required to work two hours daily on the farm and garden, assisting in planting and cultivating the field crops and vegetables, and, as far as possible, this work is made instructive. The constant aim is to make the instruction practical throughout, along with a general scientific education.

DEPARTMENT OF MATHEMATICS.

Professor L. L. McInnis, A. M.

Instruction in this department will have for its aim, to lead the student into the habit of thoroughly analyzing every subject. He

will be taught to accept nothing as true in mathematical science, unless rigidly demonstrated, and he will be required so to demonstrate all rules and principles before applying them to the solution of problems. He will be made to realize the importance of this science in the practical affairs of life, as well as its value in strengthening and disciplining the intellectual powers, by carefully selected and original problems throughout the course, involving the application of its principles to the arts, industries and applied sciences of to-day.

The principles enunciated and established in the texts, will be constantly supplemented by oral and written lectures tending to show their application. In surveying and levelling, much attention will be devoted to making the student thoroughly familiar with the use of the Compass, the Transit and the Level.

The department is supplied with all the instruments necessary to give the student practice in these subjects.

In the application of mathematics to mechanics, the student will be taught the doctrine of forces—their composition and resolution, laws of gravity, laws of motion, &c. A series of lectures on the History, Utility and Philosophy of Mathematics will be given.

The Professor offers a gold medal to be competed for by the members of the Second Class. The examination will embrace all the subjects taught in the first and second years.

TEXT-BOOKS.—Venables' Arithmetic, Davies' Bourdon, Venable's Geometry, Schuyler's Trigonometry, Mensuration, Surveying and Levelling, Church's Analytical Geometry, Wood's Mechanics, Church's Calculus.

DEPARTMENT OF MECHANICAL ENGINEERING AND DRAWING.

Professor Franklin Van Winkle, M. E.

The aim of this department is the instruction of the pupil in the applications of the sciences to Engineering and the Mechanic Arts

in a manner which will be thorough, practical and of direct utility.

Instruction is imparted by practice (in shops and drawing office) text-books and lectures.

The following subjects are taught:

I. MECHANICAL DRAWING.—This subject is taught by lecture and text-book, and by practice, free-hand and with drawing instruments; and embraces free-hand sketching and shading of geometrical solids, and intersection of solids, lettering, sketching of farm implements, with dimensions; geometrical construction with instruments; drafting to scale, and architectural drawing, and drawing of constructions in wood; projection of elementary pieces of mechanism; projectional drawing of machines and structures from sketches and measurements; drawing of designs for machines and structures; drawing for graduating thesis.

TEXT-BOOKS.—McCord's Mechanical Drawing, Lectures.

All drawings are original and not copied by the student.

Methods of reproducing and blue-printing are also taught.

Each student must provide himself with a set of drawing instruments. The cost will be about \$8 for all that is required.

He will make his own "T" square and set squares (triangles) in the shops as part of his regular exercises there. Pencils, paper and ink can be obtained at the college book store at regular market prices.

Students are advised not to make purchases of drawing instruments before entering the college, as arrangements have been made with reliable makers to furnish instruments on advantageous terms.

II.—ENGINEERING.—Instruction in this branch of the department is by text-book and lecture. Like drawing with shop work, the instruction here is made concurrent with shop work and drawing,

Theoretical instruction is practically illustrated and applied by the student for himself.

The subjects taught are:

Materials of Construction—their resistance with experiments on their strength, &c.

Masonry—foundations, walls, arches, &c.

Carpentry—framing, floors, roofs, &c.

Bridges—of stone, wood, iron, suspension, &c.

Roads—common, railways, and railway appliances.

Determination of formulæ for strength of beams and columns with verification by experiments; elements of mechanism; the steam engine and steam machinery, with practical experiments on college engine with indicator and dynamometer; special study of the locomotive, from complete set of working drawings; iron and steel as materials of construction.

The student to write a monthly essay in the department, and before graduation, to submit a thesis on approved subject, accompanied by drawings and shop work.

TEXT-BOOKS.—Mahan's Civil Engineering, Fairbairn's Elements of Mechanism, Bourne's Catechism of Steam Engine, Lectures.

DEPARTMENT OF MILITARY SCIENCE.

First Lieutenant C. J. Crane, 24th U. S. Infantry.

The instruction in this department is in conformity with the act of Congress, and is under the charge of an officer of the army detailed for the purpose by the Secretary of War. No course of class room studies is given, but the instruction is entirely practical, being confined to Artillery and Infantry drills, and light guard duty. The Military System as used here in no way interferes with studies, but is a means of discipline and wholesome restraint, and at the same time developes in the student a high sense of honor, a manly bearing and that self-reliance and self-respect which grow out of a consciousness of personal responsibility.

INDUSTRIAL DEPARTMENT.

Professors Georgeson and Van Winkle.

Each student is required to labor ten hours a week throughout

the session. The Agricultural students, in the fields, orchards and gardens ; the Mechanical students, in the shops. When the daily signals are sounded for work, the sections of students form as in all other class formations, and after roll call, march to their respective places of work, where their duties are assigned them by their respective instructors. This labor is an essential part of the professional training which the college aims to give : is carefully performed under the personal supervision of the Professors and their Assistants ; and is regarded as fully compensated by the instruction given, and the skill acquired. Each student is required to work in overalls—a suit costing here \$1.25.

FARM, AND FARM WORK.

E. Kellner, Farm Superintendent.

Though the college tract contains 2,416 acres, yet it has only 240 acres under fence—80 in a pasture ; 80 allotted to the college buildings and grounds, and to Professors quarters and gardens ; leaving only 80 acres for agricultural and horticultural work proper. The stock consists of four work mules, a thoroughbred short-horn bull, and about thirty head of common cattle, and about seventy head of thoroughbred and grade Poland-China hogs. The farm supplies the students' mess-hall with all of its milk and pork. There is a fair equipment of improved ploughs, cultivators, mowers, rakes, harrows, and hand-tools needed on a farm, and each student is made as familiar with their use as the time permits. He is required to take part in the preparation of land, and in the planting, cultivating and harvesting of the regular and special crops, garden work, orchard culture, and the general improvement of the college grounds. During the past winter the Agricultural Class planted over 1000 shade trees on the lawn, and grafted nearly 1000 apple stock, which were bought for the purpose of giving them instruction. In practical botany, each student is required to collect, analyze, and mount properly a certain num-

ber of weeds and plants, characteristic of the flora of this region. Under the Professor's guidance are carried out various experiments of interest to the farmer or fruit-grower.

The farm is not expected to be a source of profit to the college, as it is used primarily as a laboratory for the practical instruction of students, whose labor can never be made remunerative to the college, without disregarding the leading object—instruction. It is really now on too small a scale for the wants of a thoroughly practical school of agriculture, and needs sadly a great extension in all its leading features—notably in the department of live-stock, fine specimens of leading breeds of all our domesticated animals being indispensable to practical instruction in stock-breeding.

SHOPS, AND SHOP WORK.

F. M. Gilbert, Foreman.

The Mechanical Department occupies a two-story wooden building, 84x34 feet, and two small attached rooms. In order to give systematic practical instruction it has been organized as follows:

1. Carpenter shop.
2. Forge shop.
3. Vise shop.
4. Wood-working Machine Shop.
5. Metal-working Machine shop.
6. Steam Enginery.

Five thousand dollars has been spent for tools, machinery, 12 horse power engine and boiler, and materials necessary for a thorough equipment of these shops on a useful basis, and the student, who will complete the prescribed three years course of work in passing through them, will be well fitted for commencing life in some manufacturing or mechanical pursuit. As evidence of each year's proficiency, he will be expected to produce some piece of work of value and usefulness.

All shop work is executed from drawings furnished to the

student, or made by him ; he is instructed how to read and measure drawings, to make free-hand sketches with dimensions of work in hand, and to make out correct bill of material from same before beginning his exercise with tools. All work must come up to the standard of good workmanship, before he is allowed to begin the next exercise or work. Students are held strictly accountable for the preservation and order of the tools or machines to which they are assigned, after having been taught how to put them in order.

Pocket callipers and a 24 inch rule are needed by each student - they can be gotten here.

Before any student in this Department can graduate, he must place on exhibition some tool, implement or machine which he has made in the shops, and which has been pronounced satisfactory by the Professor of Mechanical Engineering.

REMUNERATIVE WORK.

A limited number of students can pay their way through college, by discharging certain special duties on the farm and in the shops, and by acting as janitors. Those desiring these places next session should apply early. The college *cannot guarantee* to any other students sufficient labor to meet their expenses in whole or in part, as work can be furnished only as the interests of the institution require it, there being no special fund for employing students. All the work on the place, however, agricultural or mechanical, which students can perform without detriment to their studies, will be given them at regular wages, in preference to employing outside workmen.

STATE STUDENTS.

The Seventeenth Legislature, by Act approved March 30, 1881, amended the Revised Civil Code as follows :

“Article 3692 a. There shall be maintained and instructed at said College [A. & M. College of Texas] annually, free of charge to them, three students from each Senatorial District in this State, one of whom shall be appointed by the Senator of such District, and the other two by the Representatives thereof. One-half of said students so appointed shall be compelled to take an Agricultural, and the other half a Mechanical course of study, to be assigned thereto by the President of said College ; and in order to pay their expenses the Comptroller, on proper vouchers being filed in his office by the Directors, is authorized to draw his warrant on the State Treasurer, against any appropriation made for that purpose.”

To carry this into effect, the Board of Directors have adopted the following :

RESOLVED, That the Senator from the first Senatorial District will appoint one student from said District, who shall take a Mechanical course, and the Representatives from said first District will appoint two students from said District, who shall take an Agricultural course in the said A. M. College of Texas, free of charge ; and the Senators and Representatives will appoint students from the other Districts as follows :

- 2 District, 1 in Agriculture and 2 in Mechanics.
- 3 District, 2 in Agriculture and 1 in Mechanics.
- 4 District, 1 in Agriculture and 2 in Mechanics.
- 5 District, 2 in Agriculture and 1 in Mechanics.
- 6 District, 1 in Agriculture and 2 in Mechanics.
- 7 District, 2 in Agriculture and 1 in Mechanics.
- 8 District, 1 in Agriculture and 2 in Mechanics.
- 9 District, 2 in Agriculture and 1 in Mechanics.
- 10 District, 1 in Agriculture and 2 in Mechanics.
- 11 District, 2 in Agriculture and 1 in Mechanics.
- 12 District, 1 in Agriculture and 2 in Mechanics.
- 13 District, 2 in Agriculture and 1 in Mechanics.
- 14 District, 1 in Agriculture and 2 in Mechanics.
- 15 District, 2 in Agriculture and 1 in Mechanics.
- 16 District, 1 in Agriculture and 2 in Mechanics.
- 17 District, 2 in Agriculture and 1 in Mechanics.
- 18 District, 1 in Agriculture and 2 in Mechanics.
- 19 District, 1 in Agriculture and 2 in Mechanics.
- 20 District, 2 in Agriculture and 1 in Mechanics.

- 21 District, 2 in Agriculture and 1 in Mechanics.
- 22 District, 1 in Agriculture and 2 in Mechanics.
- 23 District, 1 in Agriculture and 2 in Mechanics.
- 24 District, 2 in Agriculture and 1 in Mechanics.
- 25 District, 1 in Agriculture and 2 in Mechanics.
- 26 District, 2 in Agriculture and 1 in Mechanics.
- 27 District, 1 in Agriculture and 2 in Mechanics.
- 28 District, 2 in Agriculture and 1 in Mechanics.
- 29 District, 1 in Agriculture and 2 in Mechanics.
- 30 District, 2 in Agriculture and 1 in Mechanics.
- 21 District, 1 in Agriculture and 2 in Mechanics.

[In the above, the "one" student is to be appointed by the Senator, the "two" by Representatives.]

"RESOLVED, That the Senators and Representatives be requested to make their appointments after competitive examinations.

"RESOLVED, That should vacancies occur during the session, the Senator or Representatives entitled to make the appointments in the first instance, shall be immediately notified by the President of the A. & M. College of Texas to fill said vacancies. Should such vacancies be not filled in thirty days from the time notice has been sent, the President shall fill said vacancies.

"RESOLVED, That the age of applicants be not under sixteen years, and that they shall be able to pass an acceptable examination in arithmetic as far as and including proportion, and that they have a fair understanding of elementary grammar and geography, but no student shall be matriculated who has a chronic or contagious disease, or is otherwise physically incompetent to perform agricultural or mechanical labor. That such student shall enter the agricultural or mechanical course, and the labor performed by him shall be instructive, the number, of hours devoted thereto shall not be less than ten per week; and while performing such service he will be allowed to wear clothing suitable to his occupation. At all other times the students shall wear the prescribed uniform of the College.

Applicant must invariably present written testimonials of good, moral character and correct habits.

All State students will receive, free of charge, from the College, board, fuel, washing, lights and tuition, but must supply their own books, clothing, towels, sheets, blankets, pillow-cases, clothes bag, comb and brush.

For information concerning vacancies, address the President of the College. All appointments hold good until the student graduates or is sooner discharged.

PLAN OF INSTRUCTION.

The plan of instruction consists of an Agricultural Course of three years for students in Agriculture, and a Mechanical Course of three years for students in Mechanics. All students must enter one or the other of these Courses—pay students making their own selection. State students being assigned in accordance with their appointments. Every student satisfactorily completing either three years' course will be graduated with the full diploma of the College. No distinction whatever will be made between pay and state students in studies or duties. Optional courses in the Ancient and Modern Languages are open to students, without extra charge.

AGRICULTURAL COURSE.

FIRST YEAR—THIRD CLASS.		
1st Term.	Mathematics.	Venable's Arithmetic, Davies Bourdon.
	English.	Clark's Normal Grammar, James' Southern Selections, bi-weekly compositions and declamations.
	Agriculture.	History and description of breeds of domesticated animals—cattle, horses, sheep, swine, by lectures.
2nd Term.	Work.	Farm, garden and orchard culture.
	Mathematics.	Venable's Geometry.
	English.	Alex H. Stephens' History U. S. ; James' Southern Selections ; bi-weekly compositions and declamations.
	Agriculture.	Gray's Structural and Systematic Botany ; soils, their formation, constituents, classification, &c.
	Work.	Farm, garden and orchard culture.
SECOND YEAR—SECOND CLASS.		
1st Term.	Mathematics.	Schuyler's Trigonometry and mensuration ; Schuyler's Surveying.
	Physies.	Pynchon's Physies, and laboratory work.
	Agriculture.	Mile's Stock-Breeding ; History of Agriculture, lectures.
	English.	Hill's Science of Rhetoric.
	Work.	Farm, garden and orchard culture.
2nd Term.	Monthly Essay	
	Mathematics.	Woods Elementary Mechanics.
	Chemistry.	Roscoe's Chemistry : Chemical Physies, laboratory work.
	English.	Anderson's Universal History.
	Agriculture.	Fertilizers, field crops, tillage, lectures : Whites' Gardening in the South.
	Work.	Farm, garden and orchard culture.
	Monthly Essay.	
THIRD YEAR—FIRST CLASS.		
1st Term.	Agriculture.	Zoology, Entomology, Anatomy, and Veterinary Science.
	Chemistry.	Laboratory work in qualitative analysis.
	Astronomy.	Lockyer's Outlines.
	English.	Johnston and Browne's English Literature.
	Work.	Experimental work.
	Professional thesis	Monthly.
2nd Term.	Chemistry.	Laboratory work in Agricultural Chemistry.
	Geology.	Dana's Elements.
	Agriculture.	Veterinary Science, Forestry, Meteorology.
	Political Economy	Mill's Principles of Political Economy.
	Law.	Constitutions U. S. and of Texas, Business law and forms.
	Farm Engineering	Irrigation, drainage, water supply of farms, farm buildings, roads, fences, implements, machinery, &c.
	Graduating Thesis	

MECHANICAL COURSE.

FIRST YEAR—THIRD CLASS.		
1st Term.	Mathematics. English. Physics. Drawing. Shop Work.	Venable's Arithmetic, Davies' Bourdon, Clark's Normal Grammar, Composition and Declamations, James' Southern Selections. Avery's Physics, Experiments. Free-hand drawing. Elementary constructions in wood with hand-tools.
2nd Term.	Mathematics. English. Physics. Drawing. Shop Work.	Venable's Geometry. Alex. H. Stephens' History U. S.; Compositions and Declamations, James' Southern Selections. Avery's Physics, Experiments, Laboratory work. Geometrical constructions with instruments, McCord's Mechanical Drawing. Practice with wood-working machinery.
SECOND YEAR—SECOND CLASS.		
1st Term.	Mathematics. Physics. English. Drawing. Shop Work.	Schuyler's Trigonometry, Mensuration and Surveying. Pynchon's Physics, Laboratory work. Hill's Science of Rhetoric. McCord's Mechanical Drawing. Elementary metal-working, filing, chipping, screw-cutting, steam fitting.
2nd Term.	Mathematics. Chemistry. English. Engineering. Drawing. Shop Work.	Church's Analytical Geometry. Roscoe's Chemistry, Chemical Physics, Laboratory work. Anderson's Universal History. Fairbairn's Elements of Mechanism. Projection of Elementary Machines, &c. Machine tool work—as boring, turning, screw-cutting, drilling, &c.: practical steam engine, mill work.
THIRD YEAR—FIRST CLASS.		
1st Term.	Mathematics. English. Engineering. Astronomy. Shop Work. Drawing. Professional Thesis.	Wood's Mechanics, Johnston's & Browne's English Literature. Mahan's Civil Engineering. Lockyer's Outlines. Experimental work; work on original designs. Designs for Machines and Structures. Monthly.
2nd Term.	Engineering. Geology. Law. Political Economy. Drawing. Shop Work. Graduating Thesis.	Pole on Iron, Bourne's Catechism of Steam Eng. Dana's Elements. Constitutions U. S. and Texas; business law and forms. Mill's Principles. Graduation Construction.

MISCELLANEOUS.

DIPLOMAS AND CERTIFICATES.

The Diploma of the College will be conferred upon all students who complete either of the prescribed three years' courses of study, and pass satisfactory examinations on all the branches embraced therein. Each candidate for graduation is required to submit to the approval of the Faculty an essay, composed by himself, on some literary or scientific subject, which essay must be read by the author on Commencement Day, if so ordered.

To every student who completes satisfactorily any one of the optional studies—French, German, Spanish, Latin, Greek—a special Diploma on that subject will be granted.

Each student receiving a Diploma will be required to pay \$5.00 therefor. No academic honor, however, will be conferred on any student who shall prove deficient in conduct for the session.

MARKS AND EXAMINATIONS.

All recitations throughout the session are graded and recorded. The maximum for the day, week, month, quarter, term, and session is 10, which indicates perfect recitations; imperfect recitations are expressed in decimal fractions of the maximum.

Two general examinations of each class are held during the session, which every student is required to attend. The first, called the Intermediate, is held in January, and embraces the subjects of instruction in the first term. The second, called the Final, is held in June, and embraces the subjects taught during the

whole session. These examinations are mainly in writing, and the questions propounded have numerical values attached.

A monthly report is mailed to the parents or guardian of each student, showing his class standing, demerits and health.

ORGANIZATION AND GOVERNMENT.

The students are organized into a battalion of two or more companies, under the immediate command of the Commandant. The commissioned and non-commissioned officers are students, who are promoted to those positions for their soldierly qualities, due regard being had to their length of service.

The uniform is of cadet gray, and is cheap, neat and serviceable. No other dress than that which is prescribed shall be worn by students after they have received their uniforms.

As this institution is in no sense an asylum for vicious, depraved, or unmanageable boys, no such persons will ever be admitted, knowingly, under any conditions; and a student who shows himself insensible to the obligations of honor, good morals, and self-respect is at once sent home.

Mainly sports and exercises, when not in conflict with studies and duties, are properly encouraged.

Students receive the admonition and counsel of the President before being subjected to any penalty, except in case of flagrant offenses. Those who are habitually neglectful of their duties, or who do not regularly attend their classes, will be required to withdraw from the College.

No student is allowed to leave the College during the session without the permission of the President, on application through the Commandant.

The strictest attention to study and the most exact punctuality in attendance on recitations, and other duties, will be made the *condition* of every student's continuance at the College; and any

student who without authority absents himself from recitation or any other duty, deserts his class, or refuses to attend when warned shall be dismissed, or less severely punished, at the discretion of the Faculty.

Students are prohibited, under penalty of dismissal, from having in their possession ammunition, weapons or arms not issued for the performance of military duty; nor shall these be retained loaded in quarters under any pretext.

Students are prohibited entering into combinations under whatever pretext. One who shall begin, excite, cause or join in any boisterous or riotous conduct, or become a party to any agreement to avoid or violate any regulation, to hold no intercourse with a comrade, or to do any act to the prejudice of good order and military discipline, shall be dismissed.

No student shall have in his possession, or play at, cards, or games of chance, engage in a raffle, or in any manner wager money or other things, on penalty of dismissal.

Permission to attend private parties, or places of public amusement, will not be granted during the term.

No Cadet can be granted a leave of absence during a term of twenty weeks, without an urgent necessity.

A student who shall drink, or bring; or cause to be brought within the Cadet's limits, or have in his room, or otherwise in his possession, any fermented or intoxicating liquor, or fruits or viands preserved in intoxicating liquor, shall be dismissed.

A student who shall cut, mark, or otherwise injure or deface the buildings, furniture or appurtenances; the trees, shrubbery, green-sward, grounds, fences; stables, or out-houses; or who shall lose, injure, destroy, or improperly dispose of the arms, accoutrements, or other property of the College, shall make good all damage, and be dismissed or otherwise punished, according to the nature of the offense.

To each recorded delinquency a number of from one to ten proportional to the degree of the offense in a moral and military view, is assigned to express demerit.

If any student receives 150 demerits for the whole or any part of

half-year, or 250 for a greater period, he shall be declared deficient and dismissed.

RELIGIOUS AND MORAL CULTURE.

Prayers are held every morning in the Chapel, which the students are required to attend. Every Sunday afternoon there is preaching in the Chapel by one of the ministers from Bryan, and all students are expected to be present. And the Faculty will try with all the means in their power to protect and develop the moral character of those committed to their charge. Classes for Sunday Bible instruction will be formed, which students are invited to join.

LITERARY SOCIETIES.

There are two literary societies in the College, the Austin and the Calliopean. They meet weekly in their respective halls for practice in debate, literary composition and declamation.

LOCATION.

The College is situated on a tract of land of 2416 acres belonging to the State, five miles south of the town of Bryan. The Houston & Texas Central Railway passes through the grounds, and has a depot, College Station, within a quarter of a mile of the College. Daily passenger trains make close connection with the entire system of railroads of the State, thus rendering the College accessible from every section.

The postoffice, as well as depot, for the College is *College Station* and *not Bryan*.

LIBRARY AND READING ROOM.

Through the liberality of the Legislature a valuable Library and Reading Room have been provided for the use of the students, and large additions will be annually made.

The Library now comprises standard works of History, Biography, Agriculture, Mechanics, Engineering, Mathematics, Natural Sciences, Law and Political Economy, Mental and Moral Philosophy, Poetry, General Literature and Reference.

The thanks of the College are due for the following periodicals, the gifts of the proprietors, which have been kept on file during the past session in the Reading Room: Houston Daily Post, Austin Daily Statesman, Galveston Weekly Post (German), Austin Weekly Statesman, Brazos Pilot, Pacific Rural Press, Massachusetts Ploughman, Christian Observer, The Industrialist, Bulletin of National Association of Wool Manufacturers, Southern Historical Society Papers.

Gifts of books and magazines will be thankfully received. Back numbers of literary and scientific periodicals will be especially useful in completing the files already begun.

ADMISSION OF PAY STUDENTS.

Applicants for admission must have a fair knowledge of the elementary English branches; must be free from any disease, deformity or permanent injury, which would render them unfit for the prescribed duties; and must present satisfactory testimonials of good moral character. While boys under fifteen years of age are not recommended to enter, the admittance of students will be made to depend more on their state of preparation, capacity to discharge the duties required, character and general habits, than on their age.

Students supply their own towels, pillow-cases, sheets, blankets, clothes bag, comb and brush. All articles of clothing and bedding

should be plainly marked in indelible ink with the owner's name.

The Seventh Annual Session begins October 1, 1882, and ends on the Wednesday before the fourth Saturday in June, 1883.

ANNUAL EXPENSE OF PAY STUDENTS.

Matriculation fee.....	\$10 00
First quarter's board, fuel, washing and lights.....	30 00
Second quarter's board, fuel, washing and lights.....	30 00
Third quarter's board, fuel, washing and lights.....	30 00
Fourth quarter's board, fuel, washing and lights.....	30 00

Total.....	\$130 00
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Payable quarterly in advance.

COMMENCEMENT EXERCISES.

1882.

SUNDAY, JUNE 18.

Sermon. - - - - - REV. W. O. BAILEY, of Bryan.

MONDAY, JUNE 19.

Exhibition of Agricultural Department, - - - - - 9 A. M.

Undergraduate Declamations, - - - - - 8 P. M.

Competitive Squad Drill, - - - - - 5 P. M.

TUESDAY, JUNE 20.

Exhibition of Mechanical Department, - - - - - 9 A. M.

Inspection of all Departments of College, - - - - - 3 P. M.

Target Practice, - - - - - 5 P. M.

WEDNESDAY, JUNE 21.

Valedictory, - - - - - by R. S. LIPSCOMB, of Grapevine.

GRADUATING THESES.

Relation of Mathematics to Physics, by C. S. GRAVES.

Steam Boilers,,	-	-	-	-	by M. F. ARMSTRONG.
The Spectroscope,	-	-	-	-	by F. R. VON BIEBERSTEIN.

GRADUATES.

M. F. ARMSTRONG,	-	-	-	-	-	of Buckhorn.
J. M. BURFORD,	-	-	-	-	-	of Weimar.
F. R. VON BIEBERSTEIN,	-	-	-	-	-	of Burton.
SEARCY BAKER,	-	-	-	-	-	of Plantersville.
J. R. CRAVENS,	-	-	-	-	-	of Dallas County.
C. S. GRAVES,	-	-	-	-	-	of Hempstead.
S. A. HARE,	-	-	-	-	-	of Sherman.
R. S. LIPSCOMB,	-	-	-	-	-	of Grapevine.
DAVID RICE,	-	-	-	-	-	of Houston.
R. SAWYER,	-	-	-	-	-	of Dresden.
A. TALBOT,	-	-	-	-	-	of Calvert.

GOLD MEDALISTS.

PROF. COLE'S Declamation Medal,	-	J. PENNYBACKER.
PROF. MCINNIS' Mathematics Medal,	-	II. J. MILLER.
LIEUT. CRANE'S Best Shot Medal.	-	M. SCOTT.
LIEUT. CRANE'S Best Soldier Medal,	-	F. C. VON ROSENBERG.

PRIZES—BOOKS.

Professor Georgeson's Agricultural.—1, W. H. Wilson; 2, W. Wipprecht; 3, T. W. Brooks; 4, J. Boothe; 5, A. L. Sherley.

President's Agricultural.—1, E. L. Cook; 2, W. H. Wilson; 3, J. H. Ethridge; 4, E. Pennington; 5, T. H. Day.

Professor Gartner's Latin.—J. U. Searey. *Spanish*—E. L. Cook. *German*—Q. Finlay.

ASSOCIATION OF EX-CADETS' CELEBRATION.

JUNE 20.

Business Meeting,	-	-	-	-	-	9:30 A. M.
Banquet in Bryan,	-	-	-	-	-	1 P. M.
Public Meeting,	-	-	-	-	-	8 P. M.

Welcome, - - by President F. A. REICHARDT, of Houston.
Essay, - - - by P. L. DOWNS, of Temple.
Oration, - - - by R. L. BOREN, of Dallas.
Address, - - - by T. J. GIRARDEAU, Esq., of Houston.

OFFICERS OF THE ASSOCIATION FOR 1883.

P. L. DOWNS, of Temple, - - - President.
R. L. BOREN, of Dallas - - - Secretary and Treasurer.
G. W. HARDY, of Millican, - - - Orator.
W. H. BROWN, of Waco, - - - Essayist.



REPORT ON BOTANY OF BRAZOS COUNTY.

Col. J. G. James, President A. & M. College of Texas :

In presenting this report, I hope it will be regarded as giving a correct impression of the varied flora of this part of Texas. I am glad indeed to have had the opportunity of studying the rich flora of the state as illustrated in this immediate vicinity, and I am very thankful for the facilities afforded me here at the college. During the four months I have been collecting here, you have, with others, assisted me much in your encouragement and in the willingness to aid me in various ways. I trust that the herbarium I have in preparation for the college will be reliable in every way; with the specimens, as far as possible, preserved in good condition, giving a correct idea of the orders and genera they represent.

In the lists here appended I have (except list C) mentioned only the genera. A better showing would be to note the specific names. But while I have traced many of the plants to the species in their respective genera, I find many others not described in any botanical work available. It is my aim to have every species, of which there is any doubt, explicitly described, so as to be identified when occasion calls. I have not specified in the lists some marked varieties of certain species. This point and others will be considered in forthcoming reports. In three or four cases only, I have found but one specimen of a particular species. Generally all the species collected, I have found in more or less abundance; thus enabling me to have a number of duplicate specimens of the different species, to make exchanges with other botanists.

I have in view the preparation of a work on the Flora of Texas, with full descriptions of every species of plant in the state both indigenous and naturalized. To carry out such a plan would

involve years of careful and assiduous work ; would demand extended excursions in different parts of the state, and would call for occasional correspondence with some of the leading botanists of the country. Perhaps my interest in the work and the encouragement I may receive from others, will enable me to carry out such a purpose. Already the flora of Texas is associated with many well known names ; names of those who have contributed much towards a knowledge of the plants of the state. I will mention Buckley, Lindheimer, Mrs. Young, Wright and Berlandier who have gained a wide reputation among botanists.

I am giving a good share of attention to the weeds that abound in this region. They might be classified, among other ways, in reference to their growth on the cultivated ground, in fields or in pastures, and in waste places. With an acquaintance with the weeds, one is assured that many are remarkably enterprising—roaming all over the country ; and illustrate the marked qualities they have of disseminating themselves, in not a few cases to the injury of other crops.

One feature of my work, that I regard as important as any, is the study of grasses. The list herewith shows a rich varied collection. A person studying the flora here would realize that this portion of Texas can furnish an excellent field for this branch of botanic investigation. A knowledge of the different species of grass shows wide divergence, in many respects, as to choice of soil and limit of abundance. While many are prized for their nutritive qualities, making them a source of wealth to the live stock raiser and farmer, a few are as troublesome as some of the persistent weeds.

I have, as yet, given but little attention to the forestry of Texas. Some of the leading minds in American forestry and botany have, in connection with works on the trees of other states, contributed not a little towards a knowledge of the forest flora of Texas. Further investigations in this direction will furnish much important information. A collection of specimens of the indigenous trees of the state cannot fail to be of great value to an institution like this. Among the points that might be brought

up in connection therewith are the following: How the different species are distributed naturally in the state; the soils to which they are partial; the time of blooming and fruiting; economic properties aside from their ligneous value; their value in forest culture; relative growth, and other points.

There are many other points that suggest themselves in connection with the study of native plants here. But I will not stop to mention them now. In the wide fields of experiment and research, new developments are almost constantly being brought to light, in which trees and plants are often sought after to contribute important shares. The rich Flora of Texas has been conspicuous in this respect, cases of which might be cited. Future discoveries will bring forth many other developments.

Respectfully submitted,

G. C. NEALLEY.

LIST A.

EXOGENS.

Ranunculaceæ, crowfoot family—Anemone, Ranunculus, Trollius, Delphinium, 2.

Papaveraceæ, poppy family—Argemone, 2.

Fumariaceæ, fumitory family—Corydalis, 3.

Cruciferae, mustard family—Arabis, 2; Cardamine; Draba, 2; Sisymbrium, 2; Lepidium 7.

Cistaceæ, rockrose family—Helianthemum, Lechea.

Violaceæ, violet family—Viola.

Droseraceæ, sundew family—Drosera.

Hypericaceæ, St. John'swort family—Hypericum.

Caryophyllaceæ, pink family—Silene, Arenaria, 2; Stellaria, 2; Sagina.

Portulacaceæ, purslane family—Portulaca, Claytonia, 2; Undetermined, 2.

Malvaceæ, mallow family—Malva, Callirhoe, 2; Sida.

Linaceæ, flax family—Linum, 3.

Geraniaceæ, geranium family—Oxalis, 6; geranium, 2.

Polygalaceæ, milkworth family—Polygala, 2; Krameria.

Leguminosæ, pulse family—Baptisia, Lupinus, Medicago, 2; Trifolium, 5; Psoralea, 2; Petalostemon, 2; Tephrosia, Astragalus, 5; Desmodium, 3; Lespedeza, 3; Vicia, Rynchosia, Phaseolus, Vigna, Cassia, Mimosa, Schrankia, 2; Desmanthus, Calliandra, 2; Pithecolobium; Undetermined, 6.

Rosaceæ, rose family—*Rubus*, 2; *Geum*, 2.

Onagraceæ, evening primrose family—*Oenothera*, 9; *Gaura*, 4; *Jussiaea*, *Ludwigia*.

Passifloraceæ, passion flower family—*Passiflora*.

Cactaceæ, cactus family—*Opuntia*, 2.

Saxifragaceæ, saxifrage family—*Saxifraga*.

Crassulaceæ (Orpine)—*Tillæa*.

Umbelliferæ (parsley)—*Leptocaulis*, *Tiedemannia*, *Polytonia*, *Cicuta*, *Daucus*, *Sanicula*, Undetermined, 5.

Araliaceæ (ginseng)—*Aralia*, 2.

Campanulaceæ (campanula)—*Specularia*, 2.

Primulaceæ (primrose)—*Centunculus*.

Apocynaceæ (dogbane)—*Apocynum*.

Asclepiadaceæ (milkweed)—*Acerates*, 2; *Asclepias*, 10; *Asclepiodora*, *Gonolobus*.

Rubiaceæ (madder)—*Galium*, 3; *Diodia*, 3; *Houstonia*, 3.

Valerianaceæ, Valerian family—*Fedia*.

Compositæ, composite family—*Vernonia*, *Elephantopus*, *Ageratum*, *Liatris*, 3; *Eupatorium*, 2; *Aster*, 6; *Solidago*, 2; *Erigeron*, 2; *Chrysopsis*, *Silphium*, *Ambrosia*, *Xanthium*, *Rudbeckia*, *Helianthus*, 2; *Coreopsis*, 2; *Gaillardia*, *Helenium*, *Marshallia*, *Maruta*, *Artemesia*, *Antennaria*, *Cacalla*, 2; *Senecio*, 2; *Centaurea*, *Hieracium*, 3; *Lampsana*, 3; *Sonchus*, 3; *Silphium*, *Bellis*, 3; *Cirsium*, 3; Undetermined, 11.

Plantaginaceæ, plantain family—*Plantago*, 12.

Schrophulariaceæ, figwort family, *Verbascum*, *Linaria*, 2; *Pentstemon*, 2; *Mimulus*, *Gratiola*, 3; *Veronica*, *Gerardia*, *Castilleja*, 2; Undetermined, 2.

Verbenaceæ, vervian family—*Lippia*, 2; *Verbena*, 3.

Labiatae, mint family—*Hedeoma*, *Salvia*, 3; *Monarda*, 6; *Scutellaria*, *Stachys*, Undetermined, 2.

Borraginaceæ, borage family—*Lithospermum*, 2; *Cynoglossum*.

Hydrophyllaceæ, waterleaf family—*Phacelia*, 2.

Polemoniaceæ, polemonium family—*Phlox*, 3.

Convolvulaceæ, convolvulus family—*Ipomœa*, *Dichondra*, *Evolvulus*, *Cuscuta*.

Solanaceæ, nightshade family—*Solanum*, 4; *Physalis*, *Lycium*, *Datura*.

Gentianaceæ, gentian family—*Sabbatia*, 2.

Loganiaceæ, logania family—*Spigelia*.

Nyctaginaceæ, four o'clock family—*Oxybaphus*.

Phytolaccaceæ, pokeweed family—*Phytolacca*.

Chenopodiaceæ, goosefoot family—*Chenopodium*.

Amarantaceæ, amaranth family—*Amarantus*, 4.

Polygonaceæ, buckwheat family—*Polygonum*, 7; *Rumex*, 4.
 Loranthaceæ, mistletoe family—*Phoradendron*.
 Euphorbiaceæ, spurge family; *Euphorbia*, 7; *Acalypha*, *Stillingia*, *Croton*, 4; *Jatropha*, *Traigia*.
 Urticaceæ, nettle family—*Pilea*.

LIST B.

ENDOGENS.

Typhaceæ, cat-tail family—*Typha*.
 Orchidaceæ, orchis family—*Spiranthes*.
 Amaryllidaceæ, amaryllis family—*Hypoxis*, Undetermined, 2.
 Bromeliaceæ, pine apple family—*Tillandsia*.
 Iridaceæ, iris family—*Iris*, *Nemastylis*, *Sisyrinchium*, 3.
 Smilacaceæ, smilax family—*Smilax*, 3.
 Liliaceæ, lily family—*Allium*, 4; *Ornithogalum*, *Yucca*, Undetermined, 2.
 Juncaceæ, rush family—*Juncus*, 13.
 Commelynaceæ, spiderwort family—*Commelyna*, *Tradescantia*, 2.
 Cyperaceæ, sedge family—*Cyperus*, *Dulichium*, *Kyllingia*, *Hemicarpha*, *Fuirena*, *Ellocharis*, 2; *Fimbristylis*, *Psilocarya*, *Rhynchospora*, *Carex*, 7; Undetermined, 13.
 Gramineæ, grass family—*Eriuanthus*, *Cenchrus*, *Panicum*, 5; *Paspalum*, 3; *Phalaris*, *Anthoxanthum*, *Setaria*, 4; *Molcus*, *Elymus*, *Arundinaria*, *Phragmites*, *Uniola*, *Festuca*, 2; *Bromus*; *Poa*, 3; *Eatonia*, 2; *Eleusine*, *Cynodon*, *Dactyloctenium*, *Gymnopogon*, *Bonteloua* *Ctenium*, *Stipa*, *Agrostis*, *Alopecurus*, *Tripsacum*, Undetermined, 17.

LIST C.

TREES SHRUBS AND LIGNEOUS VINES NOT INCLUDED IN THE OTHER LISTS.

Coniferae, pine family—*Juniperus Virginiana*.
 Salicaceæ, willow family—*Salix nigra*, *Salix*, *Populus angulata*.
 Cupuliferae, oak family—*Quercus obtusiloba*, *Quercus nigra*, *Quercus aquatica*, *Quercus aquatica* var *lybieda*, *Quercus virens*, *Quercus cinerea*.
 Juglandaceæ, walnut family—*Juglans nigra*, *Carya*, *olivæforms*, *Caryata mentosa*, *Carya amara*.
 Platanaceæ, plane-tree family—*Platanus occidentalis*.
 Oleaceæ, olive family—*Fraxinus viridis*.
 Urticaceæ, nettle family—*Ulmus Americana*, *Ulmus alata*, *Celtis occidentalis*, *Celtis Mississippiensis*, *Morus rubra*.
 Caprifoliaceæ, honeysuckle family—*Viburnum* — *prunifolium*,

shrub; *Symphoricarpus vulgaris*, shrub; *Lonicera*, vine.

Cornaceæ, dogwood family—*Cornus stricta*, *Cornus florida*.

Rosaceæ, rose family—*Crataegus*, — *Prunus Americana*, *Prunus serotina*, *Prunus* —

Leguminosæ, pulse family—*Gleditschia triacanthos*, *Gleditschia monosperma*, *Algarobia glandulosa*, *Piscidia*.

Verbenaceæ, vervain family—*Callicarpa Americana*.

Sapindaceæ, soapberry family—*Negundo aceroides*.

Rhamnaceæ, buckthorn family—*Rhamnus Caroliniana*, *Berchemia volubilis*, (vine.)

Anacardiaceæ, cashew family — *Rhus typhina*, *Rhus copallina*, *Rhus Toxicodendron*, (vine.)

Rutaceæ, rue family—*Xanthoxylum*, 2; *Carolinianum*.

Sapotaceæ, sapodilla family—*Burrelia lanuginosa*.

Ebenaceæ, ebony family—*Diospyros Virginiana*.

Styracaceæ, storax family—*Styrax Americana*.

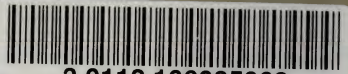
Aquifoliaceæ, holly family—*Ilex Dahoon*.

Bignoniaceæ, Bignonia family—*Tecoma radicans*, (vine.)

Vitaceæ, vine family—*Vitis mustangensis*, *Vitis æstivalis*, *Vitis vulpina*, *Vitis rupestris*, *Vitis indivisa*, *Vitis* — *Ampelopsis*, *Quinquefolia*, *Ampelopsis*, *Heptaphylla*.

RECAPITULATION.

Ranunculaceæ, 5; Papaveraceæ, 2; Fumariaceæ, 3; Cruciferae, 14; Cistaceæ, 2; Violaceæ, 1; Droseraceæ, 1; Hypericaceæ, 1; Caryophyllaceæ, 6; Portulacaceæ, 5; Malvaceæ, 4; Linaceæ, 3; Geraniaceæ, 8; Polygalaceæ, 3; Leguminosæ, 47; Rosaceæ, 8; Onagraceæ, 15; Passifloraceæ, 1; Cactaceæ, 2; Saxifragaceæ, 1; Crasulaceæ, 1; Umbelliferae, 11; Araliaceæ, 2; Campanulaceæ, 2; Primulaceæ, 1; Asclepiadaceæ, 14; Rubiaceæ, 9; Valerianaceæ, 1; Compositæ, 65; Plantaginaceæ, 12; Schrophulariaceæ, 15; Labiatae, 14; Borraginaceæ, 3; Hydrophyllaceæ, 2; Polemoniaceæ, 3; Convolvulaceæ, 4; Solanaceæ, 7; Gentianaceæ, 2; Loganiaceæ, 1; Nyctaginaceæ, 1; Phytolaccaceæ, 1; Chenopodiaceæ, 1; Amarantaceæ, 4; Polygonaceæ, 11; Loranthaceæ, 1; Euphorbiaceæ, 15; Urticaceæ, 6; Coniferae, 1; Salicaceæ, 3; Cupuliferae, 6; Juglandaceæ, 4; Platanaceæ, 1; Oleaceæ, 1; Caprifoliaceæ, 4; Cornaceæ, 2; Sapindaceæ, 1; Rhamnaceæ, 2; Anacardiaceæ, 3; Rutaceæ, 2; Sapotaceæ, 1; Ebenaceæ, 1; Styracaceæ, 1; Aquifoliaceæ, 1; Bignoniaceæ, 1; Vitaceæ, 8; Typhaceæ, 1; Orchidaceæ, 1; Amaryllidaceæ, 3; Bromeliaceæ, 1; Iridaceæ, 5; Smilaceæ, 3; Liliaceæ, 8; Juncaceæ, 13; Commelynaceæ, 3; Cyperaceæ, 32; Gramineæ, 57; Apocynaceæ, 1; Verbenaceæ, 6; Total species, 518.



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